

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
19 February 2004 (19.02.2004)

PCT

(10) International Publication Number
WO 2004/014566 A1

(51) International Patent Classification⁷: **B05B 11/00**

(21) International Application Number:
PCT/EP2003/008646

(22) International Filing Date: 4 August 2003 (04.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0218251.7 6 August 2002 (06.08.2002) GB
0229472.6 18 December 2002 (18.12.2002) GB

(71) Applicant (for all designated States except US): **GLAXO GROUP LIMITED** [GB/GB]; Glaxo Wellcome House, Berkeley Avenue, Greenford, Middlesex UB6 0NN (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BONNEY, Stanley, George** [GB/GB]; GlaxoSmithKline, Park Road, Ware, Hertfordshire SG12 0DP (GB).

(74) Agent: **RICE, Jason, Neale**; GlaxoSmithKline, Corporate Intellectual Property (CN925.1), 980 Great West Road, Brentford, Middlesex TW8 9GS (GB).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

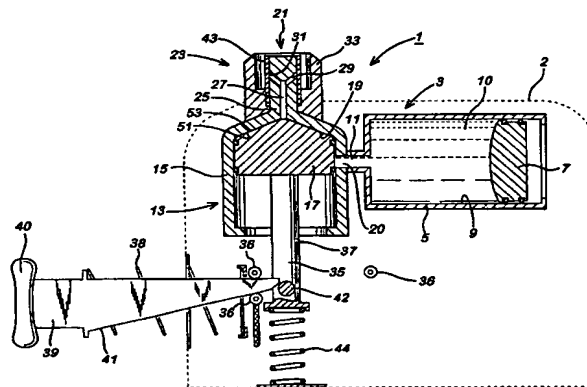
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A DISPENSER



(57) Abstract: A dispenser (1) for dispensing a metered volume of a fluid product has a storage chamber (9) for storing the fluid product in; an outlet orifice (21) through which the fluid product is dispensable from the dispenser; and a dispensing mechanism adapted in use to dispense a metered volume of the fluid product from the storage chamber through the outlet orifice. The dispensing mechanism has a metering chamber (19) which is adapted in use to provide the metered volume of the fluid product for discharge through the outlet orifice. The metering chamber is movable between a first volumetric state, in which the metering chamber has a first volume greater than the metered volume and is in fluid communication with the storage chamber such that, in use, an excess volume of the fluid product consisting of the metered volume and a surplus volume is transferable to the metering chamber from the storage chamber, and a second volumetric state, in which the metering chamber has a second volume less than the first volume and no less than the metered volume and is isolated from the storage chamber such that, in use, the metered volume of the fluid product is contained in the metering chamber ready for dispensing through the outlet orifice. The dispensing mechanism further has a bleed arrangement (11, 20) adapted in use to bleed the surplus volume of the fluid product from the metering chamber as it moves from the first volumetric state to the second volumetric state.

WO 2004/014566 A1